ATTACHMENT J1

Elmendorf AFB Electric Distribution System

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J1 Elmendorf AFB Electric Distribution System

J1.1 Elmendorf AFB Overview

Elmendorf AFB is located on the Knik Arm of Cook Inlet in south-central Alaska. The Base is bounded by the Municipality of Anchorage and the Fort Richardson Army reservation. The Base is situated on approximately 13,130 acres and has approximately 867 buildings. Elemendorf AFB is in Achorage County, Alaska.

Elmendorf AFB employs approximately nearly 8,000 people, including over 6,750 military and more than 1,150 civilians. The Base serves as headquarters for the Alaskan Command, the 11th Air Force, and Alaska-North American Aerospace Defense Command (NORAD) Region.

The Base's host command is the 3rd Wing. The 3rd Wing encompasses the following entities:

- 3rd Operations Group—The Group directs all operational and maintenance functions required to maintain combat readiness of air superiority and interdiction forces for the air defense of Alaska and North America. The 3rd Operations Support Squadron provides inclusive support for the maintenance of the Wing's flying mission.
- Fighter Squadrons—The 19th and 54th Fighter Squadrons maintain air sovereignty with the F-15C/D Eagle. The 90th Fighter Squadron flies long-range interdiction with F-15E Strike Eagle fighters.
- 517th Airlift Squadron—Using C-130 and C-12 aircraft, the 517th provides airlift support of airborne training for the 6th Infantry Division (Light) and the 11th Air Force.
- 962nd Airborne Air Control Squadron—The Squadron flies airborne warning and control operations missions with the E-3B Sentry, a modified Boeing 707 with a 30-foot-diameter rotodome mounted above the fuselage.
- 3rd Logistics Group—The Group provides the Wing with support in the areas of maintenance and repair, supply, transportation, and contracting.
- 3rd Support Group—The 3rd Support Group is responsible for a variety of support functions including mission support, communications, security, civil engineering, environmental management, recreation, food services, facility management, and other services.
- 3rd Medical Group—This Group provides medical, dental, and aerospace medicine support.

Elmendorf AFB also supports the following major installation tenants:

- The Alaska Command encompasses Air Force, Army, and Navy components and is responsible for the unified defense of Alaska.
- The NORAD Region provides for the defense of North America from air attack and implementation of assigned operational missions.
- The 611th Air Operations Group (AOG) and 611th Air Support Group (ASG), assigned to the 11th Air Force, provide critical air surveillance and command, control, and communications functions essential to the tactical warning and attack assessment in defense of Alaska.
- The 632nd Air Mobility Support Squadron provides en route maintenance support to strategic airlift missions and distinguished visitor aircraft transiting Alaska.
- The 381st Intelligence Squadron provides tactical support to national and theater commanders; command, control, and communications countermeasures deception training; and combat support.

Construction began on Fort Richardson (now known as Elmendorf AFB) on land set aside by Executive Order in 1929. The installation, included Elmendorf Field, which was named after Captain Hugh Elmendorf, a pilot who died in a test flight accident. Fort Richardson was renamed Elmendorf AFB in 1940. The first aircraft at the Base was the P-36 assigned to the 18th Pursuit Squadron. Elmendorf AFB served as the focal point for Alaska's defense against Japan in World War II.

Elmendorf remained prominent during the Cold War years. A large-scale construction effort replaced the War-era buildings. Aircraft were also modernized and included the P-51 Mustang, F-80s, F-84s, F-89s, F-102s, and F-4s. The Army vacated the field in 1951 for a new Fort Richardson, and the old facilities were transferred to the Air Force as Elmendorf AFB. The number of aircraft based at Elmendorf in the 1950s peaked at 200 in six squadrons. By 1960, however, only one squadron remained.

The Base resurfaced as a key installation in 1966 with the activation of the 21st Composite Wing, which later evolved to the 21st Tactical Fighter Wing in 1979, replacing the F-4s with the F-15. In 1991 the 3rd Wing replaced the 21st as the host unit.

Projected future mission requirements have necessitated the renovation or demolition of older facilities and the construction of new facilities. The Elmendorf AFB Capital Improvements Program (CIP) emphasizes consolidating existing facilities and maximizing their utilization as much as possible. Over the next 5 years, key projects planned for Elmendorf AFB, if implemented, will reduce the total square footage of buildings and facilities on Base by 2 percent.

Elmendorf AFB is also in the process of privatizing all military housing on the installation. Some area's of military housing which have all ready been privatized include Dallas, Silver Run and Chugach Housing. Chugach Housing and Sunflower Phase 1 Housing are unique at Elmendorf AFB, because these housing neighborhoods at Elmendorf AFB did not privatize the housing utilities with the housing privatization effort. The utilities for Chugach and Sunflower Phase 1 Housing are included in the Elmendorf AFB Utilities Privatization.

Future plans for Elmendorf AFB housing includes the renovation , demolition and reconstruction of current housing, as well as, the future construction of more housing for the installation.

Elmendorf AFB has one off-installation site, Seward Recreation Camp, located near the city of Seward, Alaska. The systems being privatized at Seward Recreation Camp which are included with the Elmendorf AFB Privatization are the electric, water and wastewater systems. Seward Recreation Camp is not included with the natural gas distribution system privatization. Seward Recreation Camp is situated on land that is leased from the City of Seward, Alaska. Seward Recreation Camp is in Kenai Penisula County, Alaska.

J1.2 Electric Distribution System Description

J1.2.1 Electric Distribution System Fixed Equipment Inventory

The Elmendorf AFB electric distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation and Government ownership currently starts to the point of demarcation, defined by the Right of Way. The system may include, but is not limited to, transformers, circuits, protective devices, utility poles, duct banks, switches, street lighting fixtures, and other ancillary fixed equipment. The actual inventory of items sold will be in the bill of sale at the time the system is transferred. The following description and inventory is included to provide the Contractor with a general understanding of the size and configuration of the distribution system.

Specifically excluded from the electric distribution system privatization are:

Elmendorf AFB

- Ramp and airfield lighting.
- Central Heat and Power Plant (CHPP).
- West Substation, which is scheduled to be rebuilt.
- Approximately 2,400 linear feet of 34.5 kV circuit, 1,050 linear feet of 115 kV circuit owned by Municipal Power and Light, and 480 linear feet of 336 MCM, 34.5 kV circuit to be retained by Elmendorf AFB.
- ML&P circuits which feed the golf course and other facilities. This circuit is located south of the rail crossing along Post Road.
- Electrical distribution and appurtenances located in Privatized housing at Elmendorf AFB, except for Chugach and Sunflower Phase 1 housing, as defined in the Right-of-Way.

Seward Recreation Camp

- Approximately 2,070 linear feet of overhead electric circuit at Seward Recreation Camp that is owned by the City of Seward.

J1.2.1.1 Description

Elmendorf AFB

Power at Elmendorf AFB is presently supplied by two sources: the Air Force-owned Central Heat and Power Plant (CHPP) and Municipal Light & Power (ML&P). The CHPP provides the majority of the electric power to the Base. For the majority of the calendar year, the power imported from ML&P is less than 1 percent of the total power consumption at Elmendorf AFB. As an example, during the period between September 2002 and August 2003, the Base imported a maximum of 0.4 percent of its power from ML&P to supplement power generation at the CHPP.

However, Elmendorf AFB plans to close the CHPP in the next several years and remove the capacity of the installation to generate its own power. After removal of the CHPP, the rebuilt West Substation will be the primary feed into Elmendorf AFB delivering energy from ML&P. Elmendorf AFB will then purchase all of its power from ML&P.

On Base there are currently four distribution substations from which power is supplied to the distribution system:

- West Elmendorf Substation, located at the CHPP (scheduled to be rebuilt - not included in the electrical distribution privatization)
- Central Substation
- Hospital Substation
- North Substation

From these four substations, power is transformed by Air Force owned transformers from 34.4 kV to 12.47/7.2 kV for distribution to the Base. These four substations are connected together by a common 34.4-kV express feed tie line that enables bulk power delivery to the substations from either the West Substation or the Hospital substation.

The distribution system at Elmendorf AFB emanating from the substations consists of a three-phase, four-wire distribution system operated at 12.47/7.2 kV. The Base has an ongoing program to upgrade the system as necessary to meet facility load growth.

The Base uses a supervisory control and data acquisition (SCADA) system for remote operation of the breakers and load tap changers at the substations. This system is monitored and controlled from the current operator of CHPP. The SCADA system is included with the system to be privatized.

The positioning of switches throughout the distribution system in most cases provides backup from one circuit to another. Mission-critical facilities have diesel generators for backup power, rather than feeds from other circuits. In addition to the backup diesel generators located at specific facilities, "black start" generators are connected to circuit 23 for powering up portions of the Base in the event of a total power outage. However, records indicate that these generators are not currently functional and are not a part of the privatization inventory.

The underground electrical distribution is on average at a depth of four feet below ground. Approximately 3% of the underground distribution system is below paved or asphalt surfaces. There is no cathodic protection on the buried metalic components of the electric distribution system.

Seward Recreation Camp

The system description for Seward Recreation Camp is included in Section 1.9 Off-Installation sites.

J1.2.1.2 Inventory

Table 1 provides a general listing of the major electric distribution system fixed assets for the Elmendorf AFB and Seward Recreation Camp electric distribution system included in the sale.

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
Elmendorf AFB				
CENTRAL SUBSTATION				
Substation ground wire	#4/0	150	SCLF	1954
Crushed Stone Aggregate	-	20	CY	1954
Chain Link Fence	-	202	LF	1954
Vehicle Access Gate	-	1	EA	1954
Concrete Foundation	-	58	CY	1954
Concrete Foundation	-	10	CY	1954
Steel Support Structure	-	1	EA	1954
Potential Transformers	-	3	EA	1954
Fused Cutouts	35kV, 300A	3	EA	1954
Surge Arrestors	-	3	EA	1954
3-Phase Gang Switch	35kV	1	EA	1954
Insulators	35kV	12	EA	1954
Copper Bus	1-1/2"	90	LF	1954
Substation Power Transformer	7.5 MVA	8	MVA	1954
Outdoor Switchgear Auxiliary Section	-	1	EA	1954
Outdoor Switchgear Main Breaker	15kV, 1200A	1	EA	1954
Outdoor Switchgear Feeder Breakers	15kV, 1200A	6	EA	1954
Outdoor switchgear Station Service Section	37 kVA	1	EA	1954

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
Outdoor Switchgear Control Panel Section	-	1	EA	1954
SCADA Remote	-	1	EA	1954
SCADA Remote Enclosure	5' X 5'	1	EA	1954
Mercury Vapor Lights	175W	12	EA	1954
HOSPITAL SUBSTATION				
Substation ground wire	#4/0	160	LF	1954
Substation ground wire	#500	195	LF	1954
Substation ground rod	-	6	EA	1954
Substation ground connections	-	23	EA	1954
Crushed Stone Aggregate	-	54	CY	1954
Chain Link Fence	-	235	LF	1954
Vehicle Access Gate	-	1	EA	1954
Concrete Foundations	4' X 10'	13	CY	1954
Concrete Foundations	17' X 43'	41	CY	1954
Substation Power Transformer	6.25 MVA	7	MVA	1954
Outdoor Switchgear Auxiliary Section	-	1	EA	1954
Outdoor Switchgear Main Breaker	15kV, 1200A	1	EA	1954
Outdoor Switchgear Feeder Breakers	15kV, 1200A	4	EA	1954
Outdoor Switchgear Station Service Section	37 kVA	1	EA	1954
SCADA Remote	-	1	EA	1954
SCADA Remote Enclosure	5' X 5'	1	EA	1954
Mercury Vapor Lights	175W	12	EA	1954
Breaker Bays	-	2	EA	1954
Oil Circuit Breaker	35kV, 1200A	2	EA	1954
3-Phase Gang Switch	35kV, 1200A	5	EA	1954
Disconnect switch motor operator	-	1	EA	1954
Single Phase Switch	35kV, 1200A	12	EA	1954
Potential Transformers	-	10	EA	1954
Current Transformers	-	9	EA	1954
Surge Arrestors	-	12	EA	1954
Insulators	-	18	EA	1954

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
Copper Bus	2"	130	LF	1954
Copper Bus	1-1/2"	200	LF	1954
NORTH SUBSTATION				
Substation ground wire	#4/0	1,829	LF	2000
Substation ground rod	-	19	EA	2000
Substation ground well		1	EA	2000
Substation ground connections Exothermic Weld	-	91	EA	2000
Crushed Stone Aggregate	-	280	CY	2000
Chain Link Fence	-	413	LF	2000
Personal Access Gate	4'	1	EA	2000
Vehicle Access Gate	20'	2	EA	2000
Yard Lights	250W HPS	16	EA	2000
Fiberglass Light Poles	30'	4	EA	2000
Transformer Foundation, Sump, Blast wall (Concrete and Rebar)	-	38	CY	2000
PCR Foundation (Concrete and Rebar)	-	25	CY	2000
Main Power Transformers (10.0/11.2/14.0 mVA)	10MVA	2	EA	2000
Package PCR Switchgear Building	28' X 38'	1	EA	2000
Metal Clad Vacuum Circuit Breaker W/Relaying	38kV, 1200A	4	EA	2000
Metal Clad Vacuum Circuit Breaker W/Relaying	15kV, 1200A	11	EA	2000
metering & relaying PT's	7200/120V	9	EA	2000
metering & relaying CT's	600:5 MR	26	EA	2000
metering & relaying CT's	1200:5 MR	6	EA	2000
Station Service Transformer Dry	50 kVA	2	EA	2000
Circuit Breaker	600V, 225A	2	EA	2000
Automatic Transfer Switch	120/240V, 225A	1	EA	2000
AC Panel board	225A	1	EA	2000
Battery Charger	-	1	EA	2000
Batteries, 20 @ 60V	125 VDC	100	AH	2000
DC Panel board	125VDC, 200A	1	EA	2000
Fire Alarm Panel	-	1	EA	2000
SCADA PANEL - SLC 500, Power Inverter	-	1	EA	2000

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
Unit Heater	5kW	2	EA	2000
Emergency Flourescent Light Fixtures	(2) 40W	5	EA	2000
Flourescent Light Fixtures	(2) 40W	7	EA	2000
Exterior Light	70W HPS	2	EA	2000
DISTRIBUTION OVERHEAD				
Bare Conductor, ACSR	#2/0	38,400	SCLF	1995
Bare Conductor, ACSR	#4/0	32,000	SCLF	2000
Bare Conductor, Aluminum	#1/0	56,800	SCLF	1955
Bare Conductor, Aluminum	#1/0	57,200	SCLF	1965
Bare Conductor, Aluminum	#2	22,800	SCLF	1955
Bare Conductor, Aluminum	#2	8,000	SCLF	1965
Bare Conductor, Aluminum	#2/0	13,200	SCLF	1955
Bare Conductor, Aluminum	#2/0	21,400	SCLF	1965
Bare Conductor, Aluminum	#2/0	9,600	SCLF	1995
Bare Conductor, Aluminum	#3/0	121,600	SCLF	1955
Bare Conductor, Aluminum	#3/0	10,000	SCLF	1965
Bare Conductor, Aluminum	#3/0	29,600	SCLF	1995
Bare Conductor, Aluminum	#336	4,000	SCLF	1985
Bare Conductor, Aluminum	#397	13,600	SCLF	1985
Bare Conductor, Copper	#1/0	5,400	SCLF	1945
Bare Conductor, Copper	#1/0	86,600	SCLF	1955
Bare Conductor, Copper	#1/0	18,000	SCLF	1965
Bare Conductor, Copper	#1/0	1,600	SCLF	1985
Bare Conductor, Copper	#1/0	26,800	SCLF	1995
Bare Conductor, Copper	#2	13,600	SCLF	1955
Bare Conductor, Copper	#2	8,000	SCLF	1965
Bare Conductor, Copper	#2	800	SCLF	1985
Bare Conductor, Copper	#2	4,400	SCLF	2000
Bare Conductor, Copper	#2/0	19,600	SCLF	1955
Bare Conductor, Copper	#2/0	13,200	SCLF	2000
Bare Conductor, Copper	#3/0	16,200	SCLF	1945
Bare Conductor, Copper	#3/0	4,800	SCLF	1985

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
Bare Conductor, Copper	#4	16,400	SCLF	1955
Bare Conductor, Copper	#4	12,800	SCLF	1965
Bare Conductor, Copper	#4	16,800	SCLF	1985
Bare Conductor, Copper	#4	18,800	SCLF	1995
Bare Conductor, Copper	#4/0	9,600	SCLF	1955
Bare Conductor, Copper	#6	27,400	SCLF	1955
Bare Conductor, Copper	#6	2,000	SCLF	1965
DISTRIBUTION UNDERGROUND				
Conductor				
Cable, Copper	#1/0	35,200	SCLF	1985
Cable, Copper	#1/0	84,000	SCLF	1995
Cable, Copper	#1/0	34,880	SCLF	2000
Cable, Copper	#2	6,400	SCLF	1955
Cable, Copper	#2	6,400	SCLF	1965
Cable, Copper	#2	54,600	SCLF	1995
Cable, Copper	#2	38,160	SCLF	2000
Cable, Copper	#2/0	34,400	SCLF	1995
Cable, Copper	#2/0	92,400	SCLF	2000
Cable, Copper	#4/0	47,600	SCLF	1985
Cable, Copper	#4/0	62,600	SCLF	1995
Cable, Copper, Direct Bury	#4/0	8,000	SCLF	1995
Ductbank				
Assume 1 lf of Ductbank / circuit lf	1 X 2	31,400	LF	1955
Assume 1 lf of Ductbank / circuit lf	1 X 2	1,600	LF	1965
Assume 1 lf of Ductbank / circuit lf	1 X 2	20,700	LF	1985
Assume 1 lf of Ductbank / circuit lf	1 X 2	30,100	LF	1995
Assume 1 lf of Ductbank / circuit lf	1 X 2	38,160	LF	2000
Assume 1 lf of Ductbank / circuit lf	1 X 2	31,400	LF	1995
TRANSFORMERS	**nom. kva**			
1-phase Pole Mounted				
1-phase, oil filled	5	1	EA	1965

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
1-phase, oil filled	5	1	EA	1985
1-phase, oil filled	5	2	EA	1995
1-phase, oil filled	5	1	EA	2000
1-phase, oil filled	10	25	EA	1955
1-phase, oil filled	10	1	EA	1965
1-phase, oil filled	10	5	EA	1985
1-phase, oil filled	10	31	EA	1995
1-phase, oil filled	15	23	EA	1955
1-phase, oil filled	15	8	EA	1965
1-phase, oil filled	15	8	EA	1985
1-phase, oil filled	15	34	EA	1995
1-phase, oil filled	15	1	EA	2000
1-phase, oil filled	25	56	EA	1955
1-phase, oil filled	25	23	EA	1965
1-phase, oil filled	25	13	EA	1985
1-phase, oil filled	25	1	EA	1989
1-phase, oil filled	25	40	EA	1995
1-phase, oil filled	37.5	30	EA	1955
1-phase, oil filled	37.5	3	EA	1965
1-phase, oil filled	37.5	8	EA	1985
1-phase, oil filled	37.5	3	EA	1991
1-phase, oil filled	37.5	20	EA	1995
1-phase, oil filled	50	27	EA	1955
1-phase, oil filled	50	7	EA	1985
1-phase, oil filled	50	58	EA	1995
1-phase, oil filled	75	21	EA	1955
1-phase, oil filled	75	1	EA	1965
1-phase, oil filled	75	4	EA	1985
1-phase, oil filled	75	13	EA	1995

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
1-phase, oil filled	100	24	EA	1955
1-phase, oil filled	100	4	EA	1985
1-phase, oil filled	100	24	EA	1995
1-phase, oil filled	112	1	EA	1995
1-phase, oil filled	112.5	2	EA	1995
1-phase, oil filled	167	6	EA	1955
1-phase, oil filled	167	3	EA	1985
1-phase, oil filled	250	2	EA	1985
1-phase, oil filled, Pad Mounted				
1-phase, oil filled, Pad Mount	10	2	EA	2000
1-phase, oil filled, Pad Mount	15	3	EA	1985
1-phase, oil filled, Pad Mount	25	2	EA	1965
1-phase, oil filled, Pad Mount	25	9	EA	1985
1-phase, oil filled, Pad Mount	25	1	EA	2000
1-phase, oil filled, Pad Mount	50	3	EA	1965
1-phase, oil filled, Pad Mount	100	1	EA	1965
1-phase, oil filled, pad mount	167	1	EA	1995
3-phase, oil filled, pad mounted				
3-phase, oil filled	45	1	EA	2000
3-phase, oil filled	75	1	EA	1955
3-phase, oil filled	75	2	EA	1965
3-phase, oil filled	75	10	EA	1985

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
3-phase, oil filled	75	12	EA	1995
3-phase, oil filled	75	2	EA	2000
3-phase, oil filled	100	1	EA	1995
3-phase, oil filled	112	2	EA	1995
3-phase, oil filled	112.5	1	EA	1955
3-phase, oil filled	112.5	6	EA	1985
3-phase, oil filled	112.5	3	EA	1995
3-phase, oil filled	150	5	EA	1955
3-phase, oil filled	150	1	EA	1985
3-phase, oil filled	150	11	EA	1995
3-phase, oil filled	150	2	EA	2000
3-phase, oil filled	225	4	EA	1955
3-phase, oil filled	225	2	EA	1965
3-phase, oil filled	225	2	EA	1985
3-phase, oil filled	225	28	EA	1995
3-phase, oil filled	225	2	EA	2000
3-phase, oil filled	250	1	EA	1995
3-phase, oil filled	300	3	EA	1955
3-phase, oil filled	300	4	EA	1965
3-phase, oil filled	300	1	EA	1985
3-phase, oil filled	300	9	EA	1995
3-phase, oil filled	450	2	EA	1995
3-phase, oil filled	500	5	EA	1955
3-phase, oil filled	500	2	EA	1985
3-phase, oil filled	500	13	EA	1995
3-phase, oil filled	500	1	EA	1997

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
3-phase, oil filled	500	1	EA	2000
3-phase, oil filled	600	1	EA	1955
3-phase, oil filled	750	2	EA	1980
3-phase, oil filled	750	2	EA	1985
3-phase, oil filled	750	9	EA	1995
3-phase, oil filled	1000	6	EA	1995
3-phase, oil filled	1500	1	EA	1985
3-phase, oil filled	1500	1	EA	2000
3-phase, oil filled	2000	1	EA	2000
Concrete Pad		21	EA	1955
Cable Terminators, UG, 1/phase at riser pole		63	EA	1955
Cable Terminators, UG, 1/phase at pad mount transformer		63	EA	1955
Fused Cutouts, 1/phase		63	EA	1955
Lightning Arrestors, 1/phase		63	EA	1955
Transformer Grounding		21	EA	1955
Concrete Pad		14	EA	1965
Cable Terminators, UG, 1/phase at riser pole		28	EA	1965
Cable Terminators, UG, 1/phase at pad mount transformer		28	EA	1965
Fused Cutouts, 1/phase		28	EA	1965
Lightning Arrestors, 1/phase		28	EA	1965
Transformer Grounding		14	EA	1965
Concrete Pad		2	EA	1980
Cable Terminators, UG, 1/phase at riser pole		6	EA	1980
Cable Terminators, UG, 1/phase at pad mount transformer		6	EA	1980
Fused Cutouts, 1/phase		6	EA	1980
Lightning Arrestors, 1/phase		6	EA	1980
Transformer Grounding		2	EA	1980

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
Concrete Pad		37	EA	1985
Cable Terminators, UG, 1/phase at riser pole		111	EA	1985
Cable Terminators, UG, 1/phase at pad mount transformer		111	EA	1985
Fused Cutouts, 1/phase		111	EA	1985
Lightning Arrestors, 1/phase		111	EA	1985
Transformer Grounding		37	EA	1985
Concrete Pad		99	EA	1995
Cable Terminators, UG, 1/phase at riser pole		297	EA	1995
Cable Terminators, UG, 1/phase at pad mount transformer		297	EA	1995
Fused Cutouts, 1/phase		297	EA	1995
Lightning Arrestors, 1/phase		297	EA	1995
Transformer Grounding		99	EA	1995
Concrete Pad		13	EA	2000
Cable Terminators, UG, 1/phase at riser pole		39	EA	2000
Cable Terminators, UG, 1/phase at pad mount transformer		39	EA	2000
Fused Cutouts, 1/phase		39	EA	2000
Lightning Arrestors, 1/phase		39	EA	2000
Transformer Grounding		13	EA	2000
UTILITY VAULTS/MANHOLES				
Vaults				
Vaults	7' X 11' X 9'	12	EA	1955
Vaults	7' X 11' X 9'	6	EA	1965
Vaults	7' X 11' X 9'	19	EA	1985
Vaults	7' X 11' X 9'	91	EA	1995
Vaults	7' X 11' X 9'	29	EA	2000
UTILITY POLES				
Wood Pole	40'	457	EA	1955
Wood Pole	40'	189	EA	1965
Wood Pole	40'	6	EA	1965
Wood Pole	40'	13	EA	1985

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
Wood Pole	40'	357	EA	1995
Wood Pole	40'	57	EA	2000
Pole Grounding 1/pole		457	EA	1955
Pole Grounding 1/pole		189	EA	1965
Pole Grounding 1/pole		6	EA	1965
Pole Grounding 1/pole		13	EA	1985
Pole Grounding 1/pole		357	EA	1995
Pole Grounding 1/pole		57	EA	2000
SWITCHES				
3-Phase Fused Switch		30	EA	1955
3-Phase Fused Switch		6	EA	1965
3-Phase Fused Switch		4	EA	1985
3-Phase Fused Switch		13	EA	1995
3-Phase Knife Switch		2	EA	1955
3-Phase Knife Switch		1	EA	1965
3-single phase switches		28	EA	1955
3-Single Phase Switches		7	EA	1965
3-Single Phase Switches		8	EA	1985
3-Single Phase Switches		28	EA	1995
Load Break Elbows		6	EA	1985
Load Break Elbows		114	EA	1995
Load Break Elbows		6	EA	2000
Pad Mount Switch	2-Way	4	EA	1985
Pad Mount Switch	2-way	13	EA	1995
Pad Mount Switch	2-way	1	EA	2000
Pad Mount Switch	4-way	4	EA	1995
Pad Mount Switch	4-way	1	EA	1995

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
STREET LIGHTING				
400W HPS - 480VAC		13	EA	1955
400W HPS - 480VAC		22	EA	1995
400W HPS - 120VAC		18	EA	1995
400W HPS - 120VAC		28	EA	1968
Low Pressure sodium		75	EA	1960
250 W High Pressure Sodium Vapor		6	EA	1955
150-W HPS 240-VAC		110	EA	1955
150-W HPS 240-VAC		5	EA	1960
150-W HPS 240-VAC		2	EA	1985
150-W HPS 240-VAC		9	EA	1995
150-W HPS 480-VAC		36	EA	1985
150-W HPS 480-VAC		10	EA	1995
150-W HPS 480-VAC		11	EA	1968
150-W HPS 120-VAC		4	EA	1955
150-W HPS 120-VAC		4	EA	1990
Metal Pole (assume height)	40'	13		1955
Metal Pole (assume height)	40'	22		1995
Street Lighting Conductor				
#2, AL Triplex		25,000	SCLF	1955
#4, AL, Triplex		12,000	SCLF	1955
#4, AL, Triplex		8,800	SCLF	1960
#4, AL, Triplex		5,200	SCLF	1968
#4, AL, Triplex		6,000	SCLF	1985
#4, AL, Triplex		400	SCLF	1990
#4, AL, Triplex		12,000	SCLF	1995

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Component	Size	Quant.	Unit	Approximate Year of Construction
Meters				
Service Meters		23	EA	1990
Seward Recreation Camp				
UNDERGROUND DISTRIBUTION				
3-Phase, 3-wire, 15 kV, in conduit, AL	#2	1,200	SCLF	1995
3-Phase, 3-wire, 15 kV, in conduit, AL	#4/0	510	SCLF	1995
1-Phase, 2-wire, 15kV, in conduit, AL	#2	2,700	SCLF	1995
3-Phase, 3-wire, 15kV, in conduit, AL	#2	300	SCLF	1995
Conduit		1,570	LF	1995
TRANSFORMERS				
3-Phase, Oil	112.5 kVA	1	EA	1985
3-Phase, Oil	100 kVA	1	EA	1985
1-Phase, Oil	25 kVA	1	EA	1985
1-Phase, Oil	50 kVA	4	EA	1985
1-Phase, Oil	75 kVA	1	EA	1985
Pad, Concrete (5' x 5' x 6")		2	EA	1985
Cable Terminators, UG, (estimated at 1 per phase at riser pole)		2	EA	1985
Cable Terminators, UG, (estimated at 1 per phase at pad mount transformer)		2	EA	1985
Fuse cutouts, (estimated at 1 per phase)		12	EA	1985
Lightning arrestors, (estimated at 1 per transformer)		8	EA	1985
Driven Grounding for Transformers (estimated at 1 per transformer)		2	EA	1985

Notes:

A = ampere
ACSR = aluminum clad steel reinforced
AH = ampere hour
AL = aluminum
AWG = American Wire Gauge
CY = cubic yard
EA = each
DB = direct buried
GRS = galvanized rigid steel
HPS = High Pressure Sodium
kA= kilo ampere

kV = kilovolt
kVA = kilovolt-ampere
LF = linear feet
MVA = megavolt ampere
Nom. kva = nominal kilovolt-amperes
Ph = phase
PVC = polyvinylchloride
PT = potential transformer
CT = current transformer
SCADA = supervisory control and data acquisition
SCLF = single conductor linear feet
UG = underground
V = volts
VAC = volts alternating current
W = wire
W = watt

J1.2.2 Electric Distribution System Non-Fixed Equipment and Specialized Tools

Table 2 lists other ancillary equipment (spare parts) and **Table 3** lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment, vehicles, and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment, vehicles, and tools.

TABLE 2
Spare Parts
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Qty	Item	Make/Model	Description	Remarks
There are no spare parts with the system to be privatized.				

TABLE 3
Specialized Vehicles and Tools
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Description	Quantity	Location	Maker
There are no specialized vehicles and tools to be transferred with the system to be privatized.			

J1.2.3 Electric Distribution System Manuals, Drawings, and Records

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
Manuals, Drawings, and Records
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Qty	Item	Description	Remarks
	GIS Drawings	Electric System Elmendorf AFB	

Qty	Item	Description	Remarks
	Drawings	Master Plan, Electric System	
		Elmendorf AFB, Anchorage AK	
	GIS Drawings	Electric System Seward Recreation Camp	
	Drawings	Master Plan Seward Recreation Camp	
		Seward, AK	
	Manuals	Electric System manuals and records located in the Exterior Electric Shop	

J1.3 Specific Service Requirements

The service requirements for the Elmendorf AFB electric distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Elmendorf AFB electric distribution system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

1. Contractor shall place all new and replacement electric distribution underground.

2. Contractor will make advance notification for scheduled outages and real time notifications for unscheduled outages. For scheduled outages the Contractor shall notify all affected occupants/users, Civil Engineering, Security Forces, and Public Affairs Office prior to proceeding.

3. Contractor shall notify the Base (Security Forces, Medical Group, Fire Dept and Civil Engineering) in advance of any road closures that shall alter the base traffic flow. The contractor shall be responsible for coordinating road closures with appropriate base officials such as Public Affairs to ensure the closure is publicized to the base and local populace.

4. Contractor shall immediately report all hazardous waste or hazardous material releases to the Base. Contractor shall fully cooperate with any emergency response in accordance with the Base's plans and directives. Contractor is responsible for the remediation and disposal of his hazardous wastes and hazardous material releases and the costs associated with such removal.

5. Contractor shall coordinate and get approval (3 WG Form 3, AF Form 103) Base Civil Engineering Work Clearance Request) from the Base before proceeding with any excavation.

6. The Contractor shall provide the Contracting Officer with a copy of any and all testing information, correspondence, and reports related to the electrical distribution system that are submitted to any regulatory agency.

7. The Contractor shall enter into a Memorandum of Understanding with the Elmendorf AFB Fire Department for fire protection of all facilities included in the purchase of the utility. The Memorandum of Understanding shall be completed during the transition period and a copy provided to the Contracting officer.

8. The Contractor shall abide by Elemendorf AFB fire protection requirements. The utility system purchased by the Contractor includes three substations. These facilities may or may not include fire alarm systems. Where required by federal, state or local regulations, the Contractor shall maintain the fire alarm system for all facilities owned and operated by the Contractor. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.

9. For all privatized lighting fixtures, operations and maintenance of lighting fixtures includes the purchase and replacement of lighting elements and the removal and disposal of replaced lighting elements.

10. All electric meters installed by the Contractor shall include demand registers unless otherwise agreed to by both parties.

11. When new or temporary meters are installed, the Contractor shall include with the meter reading report a separate report identifying the new meters installed during the prior month. The Contractor shall coordinate with the Government to determine the format of the report to be submitted.

12. IAW Paragraph C.5.1.3, Roads are not to be cut without permission of Base Civil Engineer, Chief Engineering Division or higher.

13. Contractor shall comply with Elmendorf AFB Environmental Restoration Program

13.1 Elmendorf AFB Environmental Restoration Program (ERP). Elmendorf AFB has been listed on the National Priorities List (NPL) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended. "Lessee acknowledges that Lessor has provided it with a copy, with current amendments, of the Federal Facility Agreement (FFA)", a copy of which is attached hereto and by this reference made a part hereof and labeled as **Exhibit D**, entered into by the U.S. Environmental Protection Agency (USEPA)--Region 10, the Alaska Department of Environmental Conservation (ADEC), and the Air Force and effective on September 19, 1991.

13.2 Elmendorf AFB has signed seven records of decision (RODs) at various operable units (OUs) and sites. These RODs for DP98 and OUs 1, 2, 4, 5, and 6 are legal agreements that require the management of land use controls (LUCs). LUCs are a non-engineering type of restriction that is required when contamination has been left in place and they are a component of their selected remedy in their respective RODs. LUCs range from placing limitations on types of buildings at a certain area to designating a particular area as recreational use only. Maps with approximate LUC boundaries can be provided by 3 CES/CEVR. These LUCs apply at Elmendorf AFB:

13.2.1 Basewide Groundwater - Use of the Elmendorf AFB shallow aquifer in the Outwash Plain for any purpose including, but not limited to, drinking, irrigation, fire control, dust control, or any other activity south of the Elmendorf Moraine is strictly prohibited. It is understood that portions of the shallow aquifer are contaminated and may pose a health risk.

13.2.2 Operable Unit 1 – "Restricted Use Area" designated for recreational use and construction of unmanned facilities (such as parking lots, storage buildings, etc). The construction of manned facilities (such as office buildings or residential structures) is strictly prohibited. Excavation affecting the integrity and function of the landfill caps, or impacting the shallow groundwater table is not allowed.

13.2.3 Operable Unit 2 (ERP Site ST41)–"Restricted Use Area" designated for recreational use of the parcel (such as cross country skiing, etc) and construction of unmanned facilities (such as parking lots, storage buildings, or taxiways). The construction of manned facilities (such as office buildings or residential structures) is strictly prohibited. As long as hazardous substances remain on this site at levels that preclude unrestricted use, groundwater development and the use of the groundwater at this site for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited.

13.2.4 Operable Unit 4 (East/West)– "Airfield Use Area" designated for aircraft operations and mainenence which include active and inactive runways, taxiways, and parking aprons for aircraft. The establishment of residential development of the areas is strictly prohibited.

13.2.5 Operable Unit 6 (ERP Site LF02)– "Restricted Use Area" designated for recreational use of the parcel (such as cross-country skiing, etc.) and construction of unmanned facilities (such as parking lots, storage buildings, or taxiways). The construction of manned facilities (such as office buildings or residential structures) is strictly prohibited. As a former landfill, this designation will remain indefinitely.

13.2.6 Operable Unit 6 (ERP Site LF03) – "Restricted Use Area" designated for recreational use of the parcel (such as cross-country skiing, etc.) and construction of unmanned facilities (such as parking lots, storage buildings, or taxiways). The construction of any sort of manned facilities (such as office buildings or residential structures) is strictly prohibited. As a former landfill, this designation will remain indefinitely. This site is also permanently included in the "accident potential zone" which further restricts the construction of any above ground facilities at this location.

13.2.7 Operable Unit 6 (ERP Site LF04) – "Restricted Use Area" designated for recreational use of the parcel (such as cross-country skiing, etc.) and construction of unmanned facilities (such as parking lots, storage buildings, or taxiways). The construction of any sort of manned facilities (such as office buildings or residential structures) is strictly prohibited. As a former landfill, this designation will remain indefinitely. The use of contaminated groundwater throughout LF04 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited. Drilling into the shallow aquifer is also restricted.

13.2.8 Operable Unit 6 (ERP Site SD15) – The use of contaminated groundwater throughout SD15 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited.

13.2.9 Operable Unit 6 (ERP Site WP14) –The use of contaminated groundwater throughout WP14 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited.

13.2.10 ERP Site DP98 – Excavating, digging or drilling is restricted to reduce the possibility of migration or exposure to contaminants that exceed the chemical-specific ARARs as outlined in Table 8-1 in the DP98 record of decision (ROD). If contaminated soil that exceeds residential cleanup levels is excavated, it cannot be transported to or disposed of at other location on base. No dewatering of excavations or trenches will be allowed unless contaminated water is treated prior to use or disposal. Any excavations or drilling greater than ten feet below ground surface will require special engineering controls to prevent downward migration of contamination and to protect the groundwater aquifer. The use of contaminated groundwater throughout DP98 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited. The current land use will be maintained to reduce the possibility of exposure to contaminants.

13.3 Elmendorf AFB has implemented the following procedures for managing remedial treatment systems and LUCs:

13.3.1 The grantee must comply with the most current version of the 3rd Wing Instruction (3 WGI) 32-1007, Safeguarding Utilities from Damage. The 3 WGI 32-1007 discusses the work clearance request process, which is required for any ground disturbance of more than 4 inches on Elmendorf AFB. If the shallow groundwater aquifer is encountered during excavation, there are additional dewatering requirements, which are outlined in Section 13.3.3.

13.3.2 In areas where soil contamination is known, a work plan and sampling and analysis plan must be submitted to 3 CES/CEVR for review and approval at least 90 days prior to proposed work beginning, with at least a 45-day review time. The grantee must also have a health and safety plan prepared and on file at a known contaminated soil site prior to work beginning. Maps with approximate contaminated soil site boundaries can be provided by 3 CES/CEVR.

13.3.3 In areas where groundwater contamination is known, dewatering is prohibited without an approved (by 3 CES/CEVR) work plan and sampling and analysis plan. Both the work plan and sampling and analysis plan must be submitted to 3 CES/CEVR at least 90 days prior to proposed work beginning, with at least a 45-day review time. There are several groundwater plumes on Elmendorf AFB. Maps with approximate boundaries of groundwater plumes can be provided by 3 CES/CEVR.

13.3.4 There are remedial treatment systems (e.g. engineered wetland,high-vacuum extraction, and bioventing) in operation throughout Elmendorf AFB. Operations of these systems are required by decision documents that have been agreed upon and signed by all parties (Air Force, Environmental Protection Agency, and Alaska Department of Environmental Conservation). Some of these systems are powered by electricity, and generally, have buried electrical lines in the area. The bioventing systems also have two to

three associated wells that are a part of the treatment system and are located anywhere from 5 - 30 feet from the main bioventing system. Hand digging is required within 2 feet of any system, its associated wells, or the buried electrical lines. The grantee must not disrupt these remedial treatment systems and must allow for their continued operation. If the grantee, its employees, agents or contractors damage, interrupt, or interfere with the operation of these remedial treatment systems the grantee shall immediately provide verbal notification to 3 CES/CEVR, followed up with a written notice to the Elmendorf Base Civil Engineer and a copy provided to 3 CES/CEVR. The grantee is required to pay for any damage to a treatment system and/or its associated wells. No utility lines will be placed within 10 feet of these systems or their associated wells. Maps of these systems can be provided by 3 CES/CEVR during the work clearance request review process.

13.3.5 There are over 100 groundwater monitoring wells (active/inactive and stickup/flush-mounted) located on Elmendorf AFB. The grantee will flag all wells located within 100 feet of the ROW and will take precautions to ensure wells are not destroyed or damaged. The grantee will not excavate within 5 feet of monitoring wells without prior approval from 3 CES/CEVR. The grantee will be required to repair or replace damaged monitoring wells. The grantee shall immediately notify 3 CES/CEVR of any damage to monitoring wells caused by the grantee. 3 CES/CEVR will locate wells at the grantee's request.

13.3.6 The grantee will make every effort to determine potential impacts to groundwater monitoring wells in advance of any site work. If it is determined that damage is unavoidable and it is mutually agreed with 3 CES/CEVR that a replacement well will be required, then the grantee will take the following actions:

13.3.6.1 Install replacement monitoring well(s), in accordance with ADEC regulations, at location(s) determined by 3 CES/CEVR. (This may require multiple well installations in order to get a well that can provide similar data.)

13.3.6.2 Replacement wells must be installed and sampled prior to well abandonment.

13.3.6.3 Conduct two rounds of sampling in replacement and original wells to correlate data. Sampling rounds should be three months apart.

13.3.7 The grantee will not use water from Elmendorf AFB's shallow groundwater aquifer for any purpose including, but not limited to, drinking, irrigation, fire control, dust control, or any other activity. It is understood portions of the shallow groundwater aquifer are contaminated and may pose a health risk.

13.3.7.1 The grantee will not drill through the shallow aquifer into the confined groundwater aquifer unless adequate engineering controls are used to prevent cross contamination from the shallow groundwater aquifer to the confined groundwater aquifer. All engineering controls and methods must be reviewed by 3 CES/CEVR with a minimum 30-day review time.

13.3.7.2 The grantee will not damage or interfere in any way with access to and operation of groundwater monitoring wells, remedial treatment systems and/or sampling efforts. 3 CES/CEVR and their contractors must have access, including but not limited to, vehicle access to existing monitoring wells for sampling and maintenance.

13.3.7.3 Immediately upon discovery, the grantee will provide 3 CES/CEVR with written notice of any failures to comply with these environmental land use controls.

13.3.7.4 Biennially, the grantee is required to certify compliance with LUCs by completing/signing/returning questionnaire provided by 3 CES/CEVR. Certification of compliance with LUCs can also be accomplished by grantee providing 3 CES/CEVR a signed memo of there past two years of excavating (ground disturbance of more than 4 inches) activities. 3 CES/CEVR can provide approximate LUC boundaries.

J1.4 Current Service Arrangement

Elmendorf AFB presently receives power (commodity supply) from two sources: the Elmendorf AFB Central Heat and Power Plant (CHPP) and ML&P. The CHPP presently provides the majority of the electric power to the Base; however future plans are to close the CHPP with ML&P providing all of electrical commodity supply to the installation.

For the period between September 2002 and August 2003, the Base electric power consumption was approximately 130.4 million kilowatt-hours (kWh). The peak demand for this same period occurred in December was approximately 20 Megawatts (MW). The base has evaluated the load and capacity of the electric distribution system and projects a possible future peak load of 26.35 MW.

The Alaska Department of Environmental Quality regulates any PCB containing equipment.

J1.5 Secondary Metering

J1.5.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings for all secondary meters IAW Paragraph C.3.3 and J1.6 below.

TABLE 5
Existing Secondary Meters
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Buildng Number	Facility	Location
Elmendorf AFB		
2204	HQ Alaska District Corps of Engineers	3rd Street
2212	Tech Lab	3rd Street
2218	Storage Facility	3rd Street
4140	Mt Illiamna Special Ed School	Eaker Ave.
5085	Aurora School	10th Street
5112	Orion Elementary School	Arctic Warrior Drive
5917	Auxillary Building	Near USAF Hospital
6974	Hospital Project Office	Zuckert Ave.
6983	Water Metering House	Zuckert Ave.
8414	Mt. Spurr Elementary School	McGuire Ave.
8509	1st National Bank of Anchorage	Rickenbacker Ave.
8511	Alaska USA Federal Credit Union	Rickenbacker Ave.
11735	Hazardous Storage	Vandenberg Ave.
13272	In Flight Kitchen	Airlifter Drive
15380	Air Freight Terminal	Airlifter Drive
15432	Aircraft Maintenance	30th Street
15438	C-17 Storage	30th Street
Station A GCI	Fire Station #3	
Station B GCI	End of the North/South Runway	
Station C GCI	Near Bldg 9480, Alaska Command	
Station D GCI	Government Hill	
Station E GCI	Fairchild Ave.	
Station F GCI	Arctic Warrior & Arnold	
Seward Recreation Camp		
There are no secondary meters.		

J1.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3.3 and J1.6 below.

TABLE 6
New Secondary Meters
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Meter Location	Meter Description
There are no new secondary meters required with the system to be privatized.	

J1.6 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. Invoice (IAW G.2). The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25th of each month for the previous month. Invoices shall be submitted to:

   Name: Maintenance Engineering/3 CES
   *Address:*6326 Arctic Warrior Drive, Anchorage, Alaska 99506

2. Outage Report. The Contractor's monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to:

   Name: Maintenance Engineering/3 CES
   *Address:*6326 Arctic Warrior Drive, Anchorage, Alaska 99506

3. Meter Reading Report. The monthly meter reading report shall show the current and previous month readings for all secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 15th of each month for the previous month. Meter reading reports shall be submitted to:

   Name: Maintenance Engineering/3 CES
   *Address:*6326 Arctic Warrior Drive, Anchorage, Alaska 99506

J1.7 Energy Saving Projects

IAW Paragraph C.3, Requirement, the following projects have been implemented on the distribution system by the Government for energy conservation purposes.

There are no energy saving projects associated with the system to be privatized.

J1.8 Service Area

Elmendorf AFB

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Elmendorf AFB boundaries.

Seward Recreation Camp

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Seward Recreation Camp boundaries.

J1.9 Off-Installation Sites

Seward Recreation Camp is included with the sale of the Elmendorf AFB electric distribution system as an off-installation site.

The offsite facility of Seward Recreation Camp is located in Seward, Alaska, south of Anchorage on the Kenai Peninsula. The site is a retreat for military guests and consists of cabins, trailer spaces, an Exchange, a snack bar, and charter boats and facilities. No key projects are planned for the Seward Recreation Camp that will increase the total square footage of buildings.

Annual consumption of electric power at the Seward Recreation Camp is approximately 395,820 kWh. The peak demand is approximately 209 kW, occurring in July. The system appears to be adequately sized for current loads, and, based on the projected future peak demand of 209 kW, has sufficient capacity to accommodate future demands.

As noted in Section 1.2, key projects planned for the Base are minimal. Therefore, the total square footage of buildings on site will change by only a small amount. As a result, the capacity of the electrical distribution system was evaluated based on present peak requirements and the ability to serve present loads.

J1.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 7** provides a listing of service connections and disconnections required upon transfer.

TABLE 7

Service Connections and Disconnections
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Location	Description
There are no specific transition requirements with the system to be privatized.	

J1.11 Government Recognized System Deficiencies

Table 8 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Elmendorf AFB electric distribution system. If the system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all such planned improvements. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacement Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AB.

TABLE 8
System Deficiencies
Elmendorf AFB and Seward Recreation Camp Electric Distribution Systems

Project Location	Project Description
None	

J1.12 Right of Access to the Elmendorf AFB Utility System

Exhibit A—Map of Premises

Exhibit A map or maps from the Base Comprehensive Plan or other drawings show the known locations of the utility system and are available at the Base Civil Engineering Office. Portions of the utility system may not be fully shown on the map or maps. Any such failure to show the complete utility system on the map or maps shall not be interpreted as that part of the utility system being outside the Premises. The Premises are co-extensive with the entire linear extent of the utility system sold to Grantee, whether or not precisely shown on the map or maps.

EXHIBIT A
Electric Distribution System Elmendorf AFB and Seward Recreation Camp

Qty	Item	Description	Remarks

Qty	Item	Description	Remarks
	GIS Drawings	Electric System Elmendorf AFB	
	Drawings	Master Plan, Electric System	
		Elmendorf AFB, Anchorage AK	

Exhibit B—Description of Premises

B.1. General Description of the Utility System, Lateral Extent of the Right-of-Way, and Points of Demarcation:

UTILITY SYSTEM DESCRIPTION:

The utility system may be composed of, without limitation, substations with outdoor switchgear, overhead and underground conductors, utility poles, ducts, raceways, manholes, pad-mount and pole-mount transformers, transformer pads, meters, and instrumentation related to metering of electricity delivered to end users on the Installation.

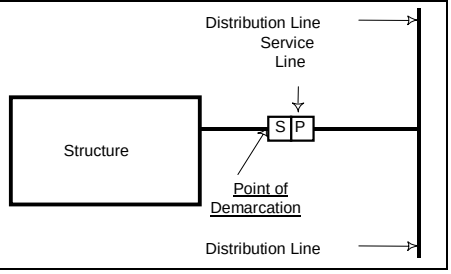
LATERAL EXTENT OF UTILITY SYSTEM RIGHT-OF-WAY:

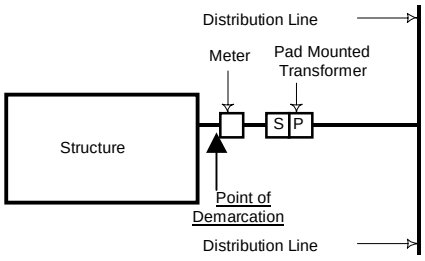
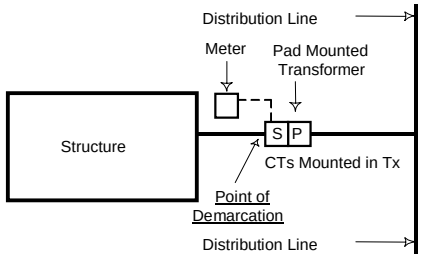
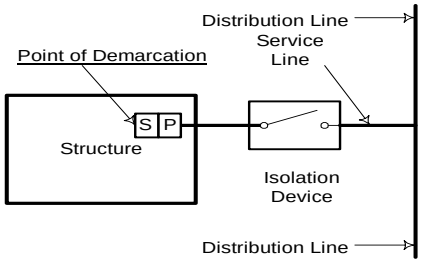
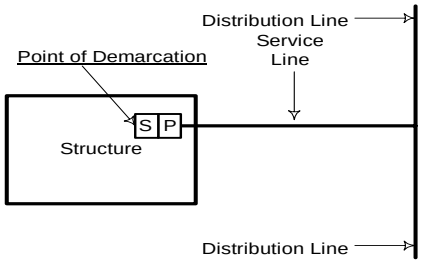
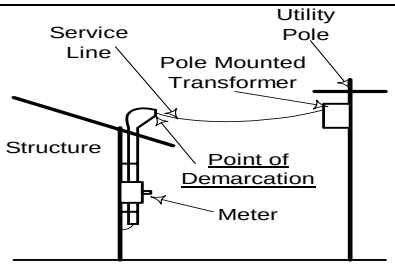
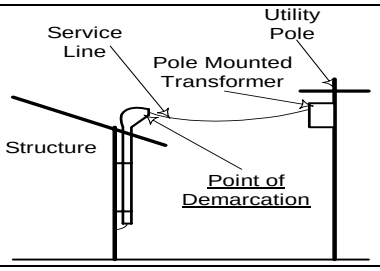
Where the utility system is installed above ground, 26-feet-wide, extending 13 feet on each side of the utility system, as installed.

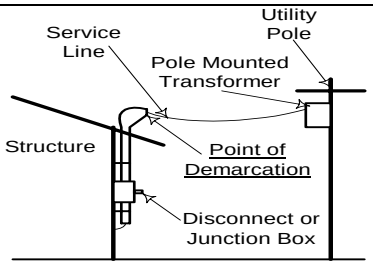
Where the utility system is installed on or under the ground, 26-feet-wide, extending 13 feet on each side of the utility system, as installed.

UTILITY SYSTEM POINTS OF DEMARCATION:

The point of demarcation is defined as the point on the utility system where ownership changes from the utility system owner to the facility owner. This point of demarcation will typically be at the point the utility enters a facility or the load side of a transformer within a facility. The table below identifies the type and general location of the point of demarcation with respect to the facility for each scenario.

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is the transformer secondary terminal spade.	Pad Mounted Transformer located outside of structure with underground service to the structure and no meter exists.	

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is down current side of the meter.	Residential service (less than 200 amps and 240V 1-Phase), and three phase self contained meter installations. Electric meter exists on or within five feet of the exterior of the building on an underground secondary line.	
POD is the transformer secondary terminal spade.	Three Phase CT metered service. Note: The meter, can, CTs, and associated wires are owned and maintained by the electric utility owner.	
POD is secondary terminal of the transformer inside of the structure.	Transformer located inside of structure and an isolation device is in place with or without a meter. Note: Utility owner must be granted 24-hour access to transformer room.	
POD is secondary terminal of the transformer inside of the structure.	Transformer located inside of structure with no isolation device in place. Note: Utility Owner must be granted 24-hour access to transformer room.	
POD is where the overhead conductor is connected to the weatherhead.	Electric meter is connected to the exterior of the building on an overhead secondary line. Note: The meter and meter can, though beyond the POD, are owned and maintained by the utility owner.	
POD is where the overhead conductor is connected to the weatherhead.	Pole Mounted Transformer located outside of structure with secondary attached to outside of structure with no meter.	

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is where the overhead conductor is connected to the weatherhead.	A disconnect switch or junction box is mounted to the exterior of the structure with no meter.	
POD is at the overhead service line's connection to the service entrance mast. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the electric meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric utility owner's meter. The water utility owner owns the service entrance mast.	Electric power is provided to a water facility via an overhead service drop. This configuration could be found at facilities dedicated to the water utility such as a water well, pump station, or water tower.	None
POD is at the transformer secondary terminal spade. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric meters and transformers.	Electric power is provided to a water facility via an underground service connection. This configuration could be found at facilities dedicated to the water utility such as a water well, pump station, or water tower.	None
POD is at the overhead service line's connection to the service entrance mast. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD	Electric power is provided to a wastewater facility via an overhead service drop. This configuration could be found at facilities dedicated to the wastewater utility such as a lift station or wastewater treatment plant.	None

Point of Demarcation (POD)	Applicable Scenario	Sketch
for the electric meter is at the wastewater utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric utility owner's meter. The wastewater utility owner owns the service entrance mast.		
POD is at the transformer secondary terminal spade treatment plant. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the meter is at the wastewater utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric meters and transformers.	Electric power is provided to a wastewater facility via an underground service connection. This configuration could be found at facilities dedicated to the wastewater utility such as a lift station or wastewater treatment plant.	None

UNIQUE POINTS OF DEMARCATION:

The following table lists anomalous points of demarcation that do not fit any of the above scenarios.

Building No.	Point of Demarcation Description
Airfield Lighting	The low side of the breaker that feeds the airfield lighting vault.
Central Heat & Power Plant	The point of demarcation will be between the feeder cable lugs and the switchgear bus at the point where the feeders connect to the plant switchgear.
Municipal Light and Power Tie-in from Substation 12	The point where the conductor strain insulators attach to the steel structure and the point where the jumpers attach to the motor operated disconnect switches inside the Hospital Substation.
Hospital Substation Feed from Auto-Transfer switch	The down current side of Breaker no. 154 at the Hospital Substation

Unique Points of Demarcation between Elmendorf AFB Housing and Elmendorf AFB	
Housing Neighborhood	**Point of Demarcation Description**

Cherry Hill	The point of demarcation is the load side of fused switch [SF-33-8].
Phoenix	The point of demarcation is the load side of the fused cutout for the radial tap serving Phoenix Housing (Facility numbers: 8361, 8357 and 8355). Ownership does not includes the fused cutout.
Phoenix	The point of demarcation is at the load side of the fused cutout for the radial tap serving Phoenix Housing (Facility numbers: 8347, 8351 and 8353). Ownership does not includes the fused cutout.
Denver	Ownership does not include the housing secondaries. The point of demarcation is at the transformer serving the Denver Housing unit, at the low side of the transformer bushing. Ownership includes the transformer.
Boston 1	Ownership does not include the housing secondaries. The point of demarcation is at the transformer serving the Boston 1 Housing unit, at the low side of the transformer bushing. Ownership includes the transformer.
Seattle	The point of demarcation is at the load side of the fused cutout switch serving the Seattle Housing underground line providing service to transformers 425 and 426 in the Seattle housing area. The fused cutout switch is located near the intersection of Sarnoski Ave. and 18th Street. Ownership does not include the fused cutout switch.
Seattle	The point of demarcation is at the load side of the fused cutout switch serving the Dayton and Seattle Housing areas from Feeder 41. The fused cutout switch is located near the intersection of Rickenbacker Ave. and 18th Street. Ownership does not include the fused cutout switch.
Boston 2	Ownership does not include the housing secondaries. The point of demarcation is at the transformer serving the Boston 2 Housing unit, at the low side of the transformer bushing. Ownership includes the transformer.
FOCO	Ownership does not include the housing secondaries. The point of demarcation is at the transformer serving the FOCO Housing unit, at the low side of the transformer bushing. Ownership includes the transformer.
GOQ	Ownership does not include the housing secondaries. The point of demarcation is at the transformer serving the GOQ Housing unit, at the low side of the transformer bushing. Ownership includes the transformer.
Dayton	Ownership does not include the housing secondaries. The point of demarcation is at the transformer serving the Dayton Housing unit, at the low side of the transformer bushing. Ownership includes the transformer.
Houston	Ownership does not include the housing secondaries. The point of demarcation is at the transformer serving the Houston Housing unit, at the low side of the transformer bushing. Ownership includes the transformer.
Sunflower Phase 2	Ownership does not include the housing secondaries. The point of demarcation is at the transformer serving the Sunflower Phase 2 Housing unit, at the low side of the transformer bushing. Ownership includes the transformer.
Boulder - 11 Acres parcel	Ownership does not include the building unit secondaries. The point of demarcation is at the transformer serving the units in the Boulder Housing (11 acre) parcel, at the low side of the transformer bushing. Ownership includes the transformer.
Douglas	The point of demarcation is where the secondary conductors attach to the load side of the transformer servicing facilities 5052 and 5054.
Douglas	The point of demarcation is at the line side of the fuse cutout for transformer 1551 serving housing facilities 4049, 4043, and 3035. Ownership includes the fuse cutout, Transformer 1551 and the secondary service conductors to facility 4055.
Facilities 3062, 3064, 3068 and 3040	The point of demarcation is the load side of the line fuse serving transformer 201,and the line side of the fused cutout for transformer 1550 for housing along Arctic Warrior Drive. Ownership does not include the line fuse or the fused cutout.
Facilities 3058 and 3060	The point of demarcation is the load side of the line fuse serving the radial tap feeding the facilities from Circuit 32. (Circuit 32 parallels the southern boundary of the installation.)
Dallas	The point of demarcation is at the load side of the fused cutout for transformers serving the Dallas housing area.
Silver Run	Served independently by ML&P.

Chugach	Point of demarcation is at the feed side of the meters of the housing unit. Ownership does not include the meter.
Sunflower Phase 1	Point of demarcation is at the feed side of the meters of the housing unit. Ownership does not include the meter.

MAPS OF THE PRIVATIZED HOUSING UNIQUE POINTS OF DEMARCATION :

The following Maps represent the privatized housing area distribution systems in relation to the utilities privatization distribution systems. The maps are to provide a general overview of the Housing privatization lines . Portions of the utility system may not be fully shown on the map or maps.

Attachment Electric Map 1.pdf
Attachment Electric Map 2.pdf
Attachment Electric Map 3.pdf

B.2. Description of Restricted Access Areas:

Description	Facility #	State Coordinates	Other Information
Central Elmendorf Substation			The ROW extends 25' beyond the substation perimeter fence/walls.
West Elmendorf Substation			The ROW extends 25' beyond the substation perimeter fence/walls.
Hospital Elmendorf Substation			The ROW extends 25' beyond the substation perimeter fence/walls.
North Elmendorf Substation			The ROW extends 25' beyond the substation perimeter fence/walls.

Exhibit C—Environmental Baseline Survey

The Air Force has determined that it is not required to conduct an EBS in regard to the sale of this utility system.

Exhibit D—Elmendorf AFB Federal Facility Agreement

The Elmendorf AFB Federal Facility Agreement is hereby attached.

FFA electronic copy main.pdf

J1.13 Right of Access to the Seward Recreational Camp Utility System

Exhibit A—Map of Premises

Exhibit A map or maps from the Base Comprehensive Plan or other drawings show the known locations of the utility system and are available at the Base Civil Engineering Office. Portions of the utility system may not be fully shown on the map or maps. Any such failure to show the complete utility system on the map or maps shall not be interpreted as that part of the utility system being outside the Premises. The Premises are co-extensive with the entire linear extent of the utility system sold to Grantee, whether or not precisely shown on the map or maps.

EXHIBIT A
Drawings
Electric Distribution System Seward Recreation Camp

Qty	Item	Description	Remarks
	GIS Drawings	*Electric System Seward Recreation Camp*	
	Drawings	Master Plan Seward Recreation Camp	
		Seward, AK	

Exhibit B—Description of Premises

B.1. General Description of the Utility System, Lateral Extent of the Right-of-Way, and Points of Demarcation:

UTILITY SYSTEM DESCRIPTION:

The utility system may be composed of, without limitation, substations with outdoor switchgear, overhead and underground conductors, utility poles, ducts, raceways,

manholes, pad-mount and pole-mount transformers, transformer pads, meters, and instrumentation related to metering of electricity delivered to end users on the Installation.

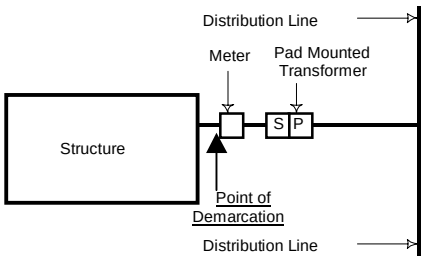
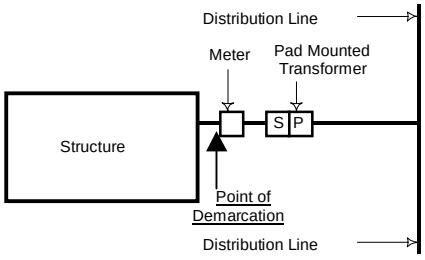
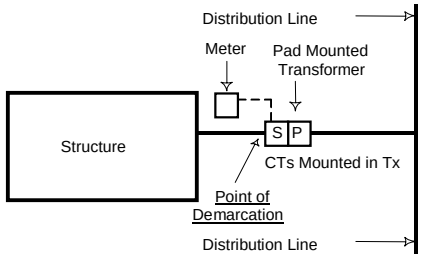
LATERAL EXTENT OF UTILITY SYSTEM RIGHT-OF-WAY:

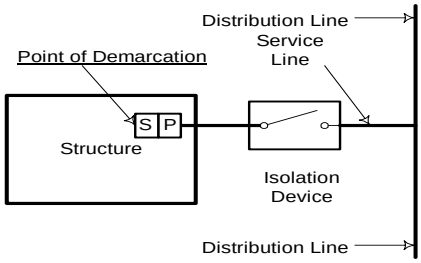
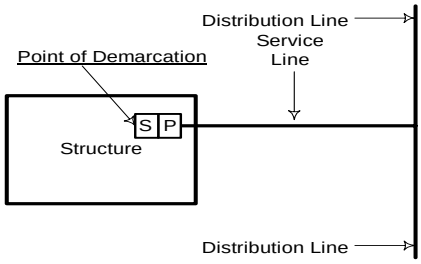
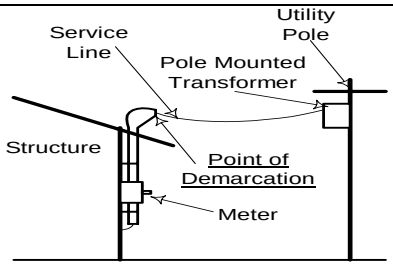
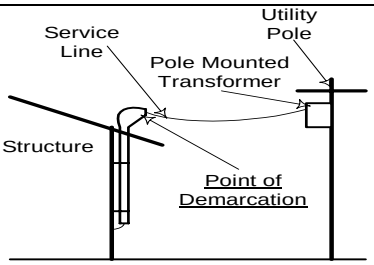
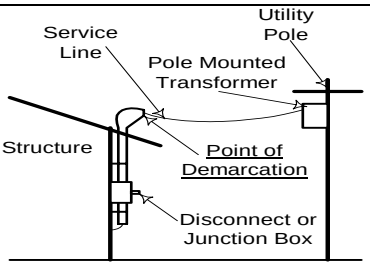
Where the utility system is installed above ground, 26-feet-wide, extending 13 feet on each side of the utility system, as installed.

Where the utility system is installed on or under the ground, 26-feet-wide, extending 13 feet on each side of the utility system, as installed.

UTILITY SYSTEM POINTS OF DEMARCATION:

The point of demarcation is defined as the point on the utility system where ownership changes from the utility system owner to the facility owner. This point of demarcation will typically be at the point the utility enters a facility or the load side of a transformer within a facility. The table below identifies the type and general location of the point of demarcation with respect to the facility for each scenario.

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is down current side of the meter.	Residential service (less than 200 amps and 240V 1-Phase), and three phase self contained meter installations. Electric meter exists on or within five feet of the exterior of the building on an underground secondary line.	
POD is down current side of the meter.	Residential service (less than 200 amps and 240V 1-Phase), and three phase self contained meter installations. Electric meter exists on or within five feet of the exterior of the building on an underground secondary line.	
POD is the transformer secondary terminal spade.	Three Phase CT metered service. Note: The meter, can, CTs, and associated wires are owned and maintained by the electric utility owner.	

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is secondary terminal of the transformer inside of the structure.	Transformer located inside of structure and an isolation device is in place with or without a meter. Note: Utility owner must be granted 24-hour access to transformer room.	
POD is secondary terminal of the transformer inside of the structure.	Transformer located inside of structure with no isolation device in place. Note: Utility Owner must be granted 24-hour access to transformer room.	
POD is where the overhead conductor is connected to the weatherhead.	Electric meter is connected to the exterior of the building on an overhead secondary line. Note: The meter and meter can, though beyond the POD, are owned and maintained by the utility owner.	
POD is where the overhead conductor is connected to the weatherhead.	Pole Mounted Transformer located outside of structure with secondary attached to outside of structure with no meter.	
POD is where the overhead conductor is connected to the weatherhead.	A disconnect switch or junction box is mounted to the exterior of the structure with no meter.	
POD is at the overhead service line's connection to the service entrance mast. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD	Electric power is provided to a water facility via an overhead service drop. This configuration could be found at facilities dedicated to the water utility such as a water well, pump station, or water tower.	None

Point of Demarcation (POD)	Applicable Scenario	Sketch
for the electric meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric utility owner's meter. The water utility owner owns the service entrance mast.		
POD is at the transformer secondary terminal spade. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric meters and transformers.	Electric power is provided to a water facility via an underground service connection. This configuration could be found at facilities dedicated to the water utility such as a water well, pump station, or water tower.	None
POD is at the overhead service line's connection to the service entrance mast. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the electric meter is at the wastewater utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric utility owner's meter. The wastewater utility owner owns the service entrance mast.	Electric power is provided to a wastewater facility via an overhead service drop. This configuration could be found at facilities dedicated to the wastewater utility such as a lift station or wastewater treatment plant.	None
POD is at the transformer secondary terminal spade treatment plant. Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD	Electric power is provided to a wastewater facility via an underground service connection. This configuration could be found at facilities dedicated to the wastewater utility such as a lift station or wastewater treatment plant.	None

Point of Demarcation (POD)	Applicable Scenario	Sketch
for the meter is at the wastewater utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric meters and transformers.		

UNIQUE POINTS OF DEMARCATION:
The following table lists anomalous points of demarcation that do not fit any of the above scenarios.

Building No.	Point of Demarcation (POD) Description
City of Seward Tie-in	The down current side of the City of Seward metered connection. Ownership does not include the meter. Located near the intersection of Diamond Blvd. And Seward Highway.

B.2. Description of Restricted Access Areas:

Description	Facility #	State Coordinates	Other Information
None			

Exhibit C—Environmental Baseline Survey

The Air Force has determined that it is not required to conduct an EBS in regard to the sale of this utility system.

Exhibit D—Elmendorf AFB Federal Facility Agreement

The Elmendorf AFB Federal Facility Agreement is hereby attached.

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